

JOB PERFORMANCE MEASURE**TASK CODE:** CBO-191**TASK:** Calibrate/Maintain the Tennelec Series 5 XLB Counter**NAME:** _____ **BADGE#** _____

REFERENCES:

1. WP 12-HP1245, Tennelec Series 5 XLB Low Background Alpha/Beta Counting System Calibration, Operation, and Maintenance
 2. Tennelec Series 5 Service Manual
 3. Tennelec Series 5 XLB and HP Installation and Operational Verification
 4. Eclipse LB Software Operation Manual
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TERMINAL OBJECTIVE:Given the Tennelec Series 5 counting system, calibrate/maintain the system IAW WP 12-HP1245

CONSEQUENCES OF INADEQUATE PERFORMANCE:

Improper survey results
Personal injury/illness

HAZARDS (PERSONNEL/EQUIPMENT STATUS):

Lead Exposure
Pinch Point from moving mechanical parts

PRE-REQUISITE TRAINING/ TASK COMPLETION:

1. CFO-192, Operate a Tennelec Series 5 XLB Counter
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TOOLS/EQUIPMENT (MATERIALS REQUIRED):

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| 1. Tennelec Series 5 XLB | 6. Pu-239 source |
| 2. P-10 Gas | 7. Sr/Y-90 source |
| 3. Attachment 1 of WP 12-HP1245 | 8. Tennelec Series 5 XLB Technical Manuals |
| 4. Crescent wrench | 9. Attachment 2 of WP 12-HP1245 |
| 5. Group, End, and Sample plates | 10. Lubricant/cleaning supplies |
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Instructions to Trainee: You shall acquire the necessary references and equipment, and complete all required documentation. Knowledge requirements shall be completed with 80% or greater accuracy. Critical step performance shall be completed with 100% accuracy.

Instructions to JPM Evaluator: The trainee is to perform the terminal objective, without assistance, on the job site. Provide clarification of requirements if requested by the trainee. You are encouraged to ask relevant questions to verify trainee understanding. If the trainee fails this JPM, clearly document the reason for failure and forward to the trainee's manager. Successful completion of this JPM shall be recorded on the trainee's qualification card.

KNOWLEDGE REQUIREMENTS:

Reference	Knowledge Requirement	Pass/Fail
1	State the required Quality Control checks and their respective frequency.	
1	State the required calibration frequency of the Tennelec Series 5 XLB.	
2,3,4	Describe the operation of the Tennelec Series 5 XLB.	
1	State the precautions associated with the operation of the Tennelec Series 5 XLB.	
1	State which 2 plates must be used for every sample/background/efficiency count.	
1,2	State the maintenance activities that will void calibration.	
1,2	State requirements that must be met prior to moving the Tennelec Series 5 XLB any great distance.	
1,2	Identify the safety precaution(s) that must be taken prior to performing any maintenance on the Tennelec Series 5 XLB system.	
1	Define the term "spillover"	
4	Discuss the capabilities of the Eclipse LB interface used for calibration	

PERFORMANCE REQUIREMENTS:

Method	Performance Requirement	Pass/Fail
P #	Startup the Tennelec Series 5 XLB.	
P #	Determine system plateau	
P #	Perform ROI setup (spillover)	
P #	Perform efficiency count.	

Method	Performance Requirement	Pass/Fail
P	Perform background count	
P	Perform a gas cylinder change out	
P#	Complete required documentation for calibration.	
P	Review calibration results for abnormalities.	
P/S	Remove a stuck plate.	
P	Remove/Install lead shielding.	
P/S	Clean the Detector window.	
P/S	Remove the detector from the system.	
P/S	Lubricate the system.	
P#	Complete required documentation for maintenance.	
P	Review maintenance documentation for abnormalities.	

indicates a critical step

FINAL EVALUATION:

PASS

FAIL

COMMENTS:

EVALUATOR SIGNATURE: _____ **DATE:**_____

TRAINEE SIGNATURE: _____ **DATE:**_____

MANAGER SIGNATURE: _____ **DATE:**_____